

Tuesday, August 16

Time	Resilience Models and Measures Track [Aspen] Chair: Marco Carvalho, FIT; Annarita Giani, GE; Michael Atighetchi, BBN	Avoiding Skynet— Humans Interacting with Autonomy Track [Redwood] Chairs: David Scheidt, Julie Marble, JHU APL	Resilient Infrastructure Track [Cypress] Chairs: David Alderson, NPS; Cherrie Black, INL		
7:00	Registration [Atrium]				
8:00	Symposium Opening Plenary [Regency Ballroom] LtGen (ret) Hernandez, Army Cyber Institute				
8:20	Welcome and Announcements [Regency Ballroom]				
8:30	Keynote: Matt Bishop, University of California-Davis	Invited Speakers	Welcome: NSRCI Co-Chairs David Alderson and Cherrie Black Intro to CIRI: Dr. David Nicol, Univ. of Illinois – Urbana-Champagne Keynote: Bob Kolasky, Deputy Assistant Secretary for Infrastructure Protection, DHS, NPPD-IP		
9:30	Invited Speakers o Greg Shannon, OSTP	Keynote: To Be Announced	CIRI Panel: Needs and Objectives for Resiliency in Critical Infrastructure Jeff Binder, CIRI Acting Director Matt Coats, DHS Program Manager (tentative) CIRI External Advisory Board Chick Macal, Argonne Nat. Lab. Steve Flynn, Northeastern Univ.		
10:30	Morning Break [Atrium]				
11:00	Invited Speakers	The Human Should be Part of the Control Loop?, Ryan Robinson, ARL	CIRI Panel: Risk Assessment Santanu Chaudhuri, Univ. of Illinois		
11:30	Ehab Al-Shaer, UNCCXinming Ou, USF	Resilient Autonomous Systems: Challenges and Solutions, Gerald Matthews, UCF	 Ryan Hruska, INL David Brannegan, ANL Jay Kesan, University of Illinois		
12:00	Hosted Lunch with Plenary Speaker [Regency Ballroom] Dominique Luzeaux, Deputy Director of the Joint Directorate for Networks, Infrastructure and Information Systems, EMA/DIRISI				
1:30	Keynote: Osama Mohammed, Florida International University	Invited Speakers	Student Competition: Lightning Talks		
2:30	Invited Speakers	-			
3:30	Reception and Poster Session [Atrium]				
6:00	Adjourn for Day				



Wednesday, August 17

Time	Cyber Track [Rosewood] Chairs: Marco Carvalho, FIT; Annarita Giani, GE; Michael Atighetchi, BBN	Control Track [Redwood] Chairs: Frank Ferrese, NAVSEA; David Scheidt, JHUAPL	Cognitive- Communications Track [Aspen] Chairs: Roger Lew, UI; James Sterbenz, HU; Krishna Kant, Temple; Nathan Lau, VT	Resilient Infrastructure Track [Cypress] Chairs: David Alderson, NPS; Cherrie Black, INL	
7:30	Registration [Atrium]				
8:20	Announcements [Regency Ballroom]				
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9:00	Keynote: Trung Tran, Program Manager, DARPA [Regency Ballroom]			Invited Papers (CIRI)	
	Cyber for Power Sector	Control for Power Sector	Cognitive Interface Papers	Steve Flynn, NEUAdam Rose, USC	
9:30	Vulnerabilities in Two-Area Automatic Generation Control Systems under Cyberattack, Saroj Biswas, Temple U	*Testbed-based Performance Evaluation of Attack-Resilient Control for AGC, Aditya Ashok, PNNL	A Graphic Form with Emergent Properties for Monitoring Renewable Generation Stations, Greg Jamieson, UT	 Himanshu Grover, Univ. of Washington Danny Rieble, Texas Tech Bill King, Univ. of Illinois Sachin Shetty, Tennessee State Univ. 	
10:00	*Survivability Analysis and Recovery Support for Smart Grids, Sahra Sarves, MST	Improving Transmission System Resilience Using an Automation Controller and Distributed Resources, Pavan Penkey, UI	System-Task Analytical Framework for Monitor Assessment, Nathan Lau, VT		
10:30	Morning Break [Atrium]				
	Cyber Deception	Control for Power Sector	Cognitive Modeling		
11:00	Dynamic Application Rotation Environment for Moving Target Defense, Michael Thompson, ANL	Energy saving in Microgrid with Tree Configurations Using Nash Bargaining Solution, Qiangguo Ren, Temple U	Social Network Analysis for Assessing Research Team Collaboration and Implementation Capacity, Jocelyne Helbing, UI	Invited Speaker Dr. Paolo Gardoni, - NIST Center for Risk-Based Community Resilience Planning	
11:30	Enabling Defensive Deception in Distributed System Environments, Nathaniel Soule, BBN	Measurement Sensitivity Analysis of Information Embedded Power Systems using ABCD Matrices, Tiffany Lakins, Drexel U	State Modeling to Identify Critical Situations, Steven Landry, Purdue U		
12:00	Hosted Lunch with Plenary Speaker and Honorary General Chair [Regency Ballroom] Massoud Amin, Director of TLI, University of Minnesota				
1:30	RRAP Discussion Dan Genua, DHS Will McNamara, DHS Russ Bowman, Coast Guard Academy			Dan Genua, DHS	
2:00				Russ Bowman, Coast	



	Asymmetric Cyber Resilience	Attack Detection/Verification	Communications Resilience	
2:30	Invited Speaker: Chris	Detection Vermation Detecting PLC Control Corruption via On-Device Runtime Verification, Luis Garcia, Rutgers U	Internet Resilience in Ashburn, Virginia, Michael Thompson, ANL	RRAP – Next Gen Panel Discussion Dan Genua, DHS
3:00	Oeman, PNNL	Recovery after Attacks of Deception on Networked Control Systems, Kiriakos Kiriakidis, US Naval A	Evaluation of Anomaly Detection Techniques for SCADA Communication Resilience, Syed Shirazi, Lancaster U	Will McNamara, DHS Panelists: TBD Chair: Cherrie Black
3:30	Afternoon Break [Atrium]			
	Cyber Operations/Defense	Disturbance Rejection	Control/Communications for the Transportation Sector	
4:00	Progressive Recovery of Interdependent Services in Enterprise Data Centers, Ibrahim El-Shekeil, Temple U	An H-infinity Approach to Stealth-resilient Control Design, Shaunak Bopardikar, UTRC	Vulnerability of Fixed-Time Control of Signalized Intersections to Cyber- Tampering, Amin Ghafouri, Vanderbilt U	Invited Panel: Owner/Operators Addressing Risk & Resilience Moderators:
4:30	Adapting Level of Detail in User Interfaces for Cybersecurity Operations, Catherine Inibhunu, Uncharted S	Distributed Disturbance Rejection Control of Clustered Cyber-Physical Systems, Almuatazbellah Boker, Marshall U	Performance Evaluation of Secure Industrial Control System Design: A Railway Control System Case Study, Xenofon Koutsoukos, Vanderbilt U	John Walsh, FEMA & Cherrie Black, INL <i>Panelists:</i> o Bruce Lundeen, AT&T o Ralph Chiczewski City
5:00	A Decision Engine for Configuration of Proactive Defenses - Challenges and Concepts, Michael Atighetchi, BBN			of Chicago, Dept. of Water Reed Dring, Stickney Water, Metropolitan Water Reclamation District of Greater Chicago Cheryl Maletich, Commonwealth Edison Company Alicia Tate-Nadeau, Chicago Office of Emergency Mgmt & Communications
5:30	Adjourn Meetings			
6:00	Networking Reception at <u>Topgolf</u> , 3211 Odyssey Ct			
7:30	Adjourn for Day			

^{*} Best Papers



Thursday, August 18

Time	Cyber Resilience Track [Cypress] Chairs: Frank Ferrese, NAVSEA; Marco Carvalho, FIT	Research and Efforts in the Human Dimension [Aspen] Chairs: Phil Bennett, SNL; Ron	Resilient Infrastructure Chairs: John Hummel, ANL; Paul Lewis, ANL; Frederic D. Petit, ANL			
		Boring, INL; Roger Lew, UI; Nathan Lau, VT	Track 1 [Redwood]	Track 2 [Rosewood]		
8:00		Registration [Atrium]				
8:20		Announcements [Re	gency Ballroom]			
8:30	Keynote: Barbara Ciaramitaro, Professor, Track Overview: Phil Benr Ron Boring					
9:00	Walsh College					
9:30	Keynote: Alexander Dolpp, Director of eDrive Software Department at	Short Presentations	Lightning Talks	Lightning Talks		
10:00	MBRNA					
10:30	Morning Break [Atrium]					
11:00	Keynote: Kevin Staggs, Senior Engineering Fellow, Honeywell CSTC	Short Presentations	Lightning Talks	Lightning Talks		
11:30						
12:00	Hosted Lunch with Plenary Speaker [Regency Ballroom] Brian Pierce, Director DARPA,I ² O					
1:30	Keynote: Annabelle Lee, Senior Tech. Exec., EPRI	Short Presentations	Track Summary and Roundtable:			
2:00			Future Planning Facilitators: NSRCI Co-			
2:30	 Keynote: Craig Miller, Chief Scientist, NRECA 		Chairs David Alderson and Cherrie Black			
3:00		Track Summary and Roundtable Introduction: Phil Bennett, Ron Boring				
3:30	Afternoon Break [Atrium]					
4:00	Cyber Resilience R&D Perspectives Panel Panel Moderator: Chair(s)	Roundtable Discussion				
4:30						
5:00						